main computer and for displaying a visual display to the user, said remote display device featuring a remote radiowave receiver for receiving said display signals, said remote display device lacking a CPU; and

(c) a remote input platform for receiving input data from the user and for transmitting said input data to said main computer, said remote input platform featuring a remote radiowave transmitter for transmitting said input data, said remote input platform lacking a CPU.

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested. A clean copy of the disclosure is attached in keeping with the examiner's request. This is done in order to overcome problems associated with copying and does not constitute addition of new material.

Claims 1-17 are in this case. Claims 1, 2, 5, 8, 9, 10, 12 and 14-17 have been rejected under § 102 (e), second paragraph as being anticipated by Yiu (6,008,777), hereinafter Yiu. Claims 3,4,6, and 7 have been rejected as being unpatentable over Yiu and Yen (5,880,721) hereinafter Yen. Claim 13 has been rejected as being unpatentable over Yiu and Hare et al. (6,084,638) hereinafter Hare.

The claims before the Examiner are directed toward a remote display device for a computer and towards a system for remote interaction with a user.

§ 102(e) Rejections

The examiner has rejected claims 1, 2, 5, 8, 9, 10, 12 and 14-17 under § 102 (e) as being anticipated Yiu. The applicant respectfully suggests that these rejections are based upon confusion over the term "TV (television)" as used by Yiu and the phrase "remote display device" as used in the present invention.

A TV is an analog device capable of relatively low resolution video display. Even HDTV (High Definition Television) has low resolution when compared to state of the art computer monitors. Therefore, the teachings of Yiu require scale conversion and a digital to analog conversion in order to permit display of PC data (which is digital) on a TV (which is an analog device). This conversion is clearly taught by Yiu in the disclosure (Column 4; lines 28-36):

> "Local PC interface unit **201** includes *converter circuitry, such as for example a scan converter (not shown) that converts the video signal **241** from a standard computer video format for display on a computer monitor **215** to any format suitable for display on an ordinary TV,* such as for example a National Television Standard Committee (NTSC) format, a phase alternation by line (PAL) format, a high definition television (HDTV) format, or the like." (emphasis added)

The signal transferred to the HDTV according to Yiu's teachings will have to be scaled and converted from digital to analog and then from analog to digital, using the analog interface of such a TV.

Thus, it is clear that Yiu recognizes the inherent difference between computer video format and TV video format. There is neither a hint nor a suggestion in the teachings of Yiu that display of PC data on a remote device other than a television is included within the scope of the invention. In fact, Yiu's claims 1 and 10 specifically require the use of a TV for display. Since Yiu's claims 1 and 10 are the only independent claims in that patent, it is clear that every conceivable embodiment of the teachings of Yiu must include a TV for remote display of PC data.

In contrast, the teachings of the present invention (page 9; lines 1-11) require neither conversion, nor a TV:

"In addition, remote A/V display device **18** preferably also features *a video expander **22** for expanding the compressed video signals for display on a screen* **24**. The type of video expander **22** and the type of screen **24** would depend upon the type of remote A/V display device **18** and could easily be selected by one of ordinary skill in the art. Examples of screen **24** include but are not limited to any type of flat screen including a plasma screen or an LCD (liquid crystal display*), a CRT (cathode ray tube) monitor*, a computer monitor or any other type of video display monitor. Thus, remote A/V display device **18** enables visual data such as a GUI (graphical user interface), other graphics or images, or a video stream, to be displayed to the user." (emphasis added)

This paragraph clearly illustrates the inherent difference between the teachings of Yiu and those of the present invention. In the present invention, the PC's desktop is captured in its digital form and compressed. Compression is digital by definition. The compressed data is then transferred as a radio frequency transmission to a display device that is capable of displaying PC resolution video. The applicant respectfully suggests that it is abundantly clear to one ordinarily skilled in the art that the phrase ""CRT monitor" refers to a CRT computer monitor, and not to a television. This assertion is clearly supported by claim 9 which refers to "...a plasma screen, a LCD (liquid crystal display) screen, and a CRT (cathode ray tube) screen." as possible examples of the screen of claim 8. Claim 8 describes a screen as part of the remote display device of claim 1. The remote display device of claim 1 is for "...receiving display signals directly from the local video card...". Therefore it is clear that no digital/analog conversion is involved and that the remote display device of claim 1 is not a TV.

The applicant respectfully asserts that the "remote display device" of claim 1 of the present invention is clearly not a TV and that the present invention is therefore novel and non-obvious with respect to the prior art teachings of Yiu. Since the applicant has successfully traversed the 102(e) objection with respect to claim 1, it follows that the 102(e) objections with respect to claims 2, 5, 8, 9, 10 and 12 have also been traversed since these claims depend from claim 1.

With respect to claims 14 and claims 15-17 which depend from it, the applicant relies upon a similar rationale to traverse the examiner's objections. The examiner points out that Yiu teaches a computer that generates "both television and computer video outputs". The applicant agrees with this analysis. The present invention teaches a computer which does not, and has no need to, generate television video outputs. The applicant respectfully suggests that this difference is both novel and non-obvious in the context of remote display devices. The examiner's 102 (e) objections to claim 14, and claims 15-17 which depend from it, are therefore traversed.

In order to expedite the prosecution, the applicant has amended claims 1, 8, and 14 in order to further emphasize the fundamental difference between the teachings of the present invention and the teachings of Yiu. As detailed hereinbelow, all of the amendments are supported by the specification and no new material is being introduced.

In claim 1 the phrase ", a video compressor communicating with said local video card " finds support in the specification on page 11 line 3 ""Main computer 14 preferably includes a video display card 14 which is connected to an A/V compressor 46 for compressing the video data..." and by item 46 in figure 1. Similarly, in clause (a) of claim 1, addition of the word compressed is supported by items 46 and 22 (compressor and expander respectively) in figure 1.

In claim 8, the word compressed has been added in (i) and the word expanded has been added in (ii) relying on support from items **46** and **22** (compressor and expander respectively) in figure 1. The function of these components is explained on page 11, lines 5-15

> " Main computer **14** preferably includes a video display card **44** which is connected to an A/V compressor **46** for compressing the video data, both of which are preferably located within a main computer box **13**. Main computer **14** sends display instructions for displaying video information on remote A/V display device **18** to video display card **44**. Video display card **44** then renders the instructions as video display signals suitable for a monitor such as screen **24**. The signals are then compressed by A/V compressor **46**. After compression, the signals are sent as radiowaves by an ISM band SP^2 transmitter **48**. The transmitted radiowaves are then received by ISM band receiver **20**, expanded by video expander **22** and displayed by screen **24** as previously described.

Similarly, the phrase "(iv) a video compressor communicating with at least one of said plurality of video cards." added to claim 14 is supported by figure 1 which shows two video display cards **44** and **74**, one of which (44) is in communication with video compressor 46. The function of these components is described on page 4 line 14 to page 5 line 6. Addition of the word compressed to claim 14 (b) finds support in the specification as described hereinabove.

The applicant respectfully suggests that claims 1, 2, 5, 8, 9, 10, 12 and 14-17 are now in condition for allowance. Prompt notice of allowance is earnestly solicited.

§ 103(a) Rejections

The Examiner has rejected claims 3,4,6 and 7 under § 103(a) as being obvious with respect to Yiu and Yen. The examiner has rejected claim 13 as being obvious with respect to Yiu and Harc.

Because claims 3,4,6, 7 and 13 all depend from claim 1, which is now in condition for allowance, the examiner's arguments are moot. Therefore, prompt notice of allowance of these claims is also earnestly solicited.

In view of the above remarks and amendments it is respectfully submitted that independent claims 1 and 14, and hence dependent claims 2-13 and 15-17 are in condition for allowance. Prompt notice of allowance is respectfully solicited.

Respectfully submitted,

Mark M. Friedman
Attorney for Applicant
Registration No. 33,883

Date: September 3, 2000

Office Action Summary	Application No. 09/197,441	Applicant(s) BEHAGEN et al.
	Examiner Christopher Grant	Group Art Unit 2611

☒ Responsive to communication(s) filed on *Sep 29, 2000*.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-17* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-17* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5, 8, 9, 10-12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yiu (6,008,777) and Phan (both of record).

Considering claim 1, Yiu discloses a remote display device for remote interaction by a user with a main computer (PC and PC interface unit 401), the device comprising:

(a) a remote display device (403, 409) for receiving signals directly form the PC; and

(b) a remote input platform (405 and associated components) for receiving input data from the user and for transmitting said input data directly to the local input port..., wherein the device lacks a CPU and such that only the main computer (PC and unit 401) has the CPU.

However, Yiu fails to specifically disclose compressed signals as recited in the claim.

In a related art, Phan discloses a remote display device (16,18) in communication with a main computer (14). The remote display device (16,18) comprises a video decompressor (28) for converting compressed signals (transmitted from a main source) into decompressed signals for proper display. Signals are compressed and decompressed for the advantage of providing greater transmission bandwidth (see col. 3, lines 49-57).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Yiu's system to include compress signals, as taught by Phan, for the typical advantage of providing greater transmission bandwidth.

Claims 2 and 5 are met by the combined systems of Yiu and Phan, wherein Yiu discloses radio-wave receivers and transmitters.

Claim 8 is met by the combined systems of Yiu and Phan. Note the expander (decompressor 28 -Phan) and the display (409 -Yiu).

Claim 9 is met by the combined systems of Yiu and Phan. Note CRT displays in both references.

Claim 10 is met by the combined systems of Yiu and Phan, wherein Yiu discloses a TV (409) comprising an audio amplifier and speaker.

Claims 11-12 are met by the combined systems of Yiu and Phan, wherein Yiu discloses keyboard (423A), pointing device (423B) and joystick (423D) connected to ports on input device (405).

Claim 14 is met by the combined systems of Yiu and Phan. Yiu and Phan disclose a system for remote interaction with a user comprising a main computer (PC and PC interface 401-Yiu) and a remote display (403, 409-Yiu) as described above in claim 1. The main computer generates both television and computer video outputs (col 4, lines 37-45). Computers of this type contain plural video cards and an operating system to process and manipulate them.

Claim 15 is met by the combined systems of Yiu and Phan, wherein Yiu discloses a main computer (PC and PC interface) having local input device(s), local and remote input ports and switching means.

Claims 16-17 are met by the combined systems of Yiu and Phan, wherein Yiu discloses radio-wave receivers and transmitters.

3. Claims 3, 4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yiu and Phan and further in view of Yen (5,880,721) (of record).

As to claims 3, 4, 6 and 7, the combined systems of Yiu and Phan fail to specify the frequency band the systems use.

In a strikingly similar system Yen teaches that remote computer displays should use a band around 2.4 GHz. In addition this band is considered to be and ISM band SP^2.

It would have been obvious to modify the combined systems Yiu and Phan, to include frequency band of 2.4GHz, as taught by Yen, for the typical advantage of conforming to known practices and FCC regulations.

4. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yiu and Phan and further in view of Hare et al. (6,084,638) (of record).

Considering claim 13, Yiu and Phan do not specify the use of a microphone with their systems.

In a strikingly similar system, Hare teaches the use of plural input devices (27a-d) including a microphone for the advantage of facilitating the user with various input devices to make selections (including voice commands). See the entire reference including but not limited to col. 6, line 64 - col. 7, line 20.

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Yiu and Phan, as taught by Hare for the advantage of facilitating the user with a system that is responsive to voice commands.

Specification

5. The disclosure is objected to because of the following informalities: The first seven pages of the specification appear to have error cause by copying. Additional text and page numbers appear at the bottom of these pages.

Appropriate correction is required.

Response to Arguments

6. Applicant's arguments filed 9/29/2000 have been fully considered but they are not persuasive.

Response to applicant's arguments

(a) Applicant indicated on page 3 of the amendment that a clean copy of the disclosure is attached. However, the clean copy is not of record in the current application. Applicant should submit (or re-submit) a clean copy of the disclosure to the Office.

(b) Applicant argues the Yiu reference, the terms "TV (television), and "remote display" on pages 3-6 of the amendment filed 9/29/2000.

In response, the examiner contends that applicant is arguing that which is not being claimed. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim 1 generally calls for a main computer and a remote display device. The Yiu reference clearly discloses a main computer in the Den and a remote display device in the family room. The television (and associated components) clearly is a remote display device (i.e. the TV is remote with respect to the main computer). As described above the combined systems of Yiu

and Phan teach all the claimed subject matter of claim 1 and therefore applicant's arguments are not persuasive.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

8. **Any response to this final action should be mailed to:**

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

WHAT IS CLAIMED IS:

1. A remote display device for remote interaction by a user with a main computer, the main computer being in communication with a main transmitter and a main receiver, the main computer featuring a local video card and the main computer featuring a local input port for receiving input instructions, the device comprising:

(a) a remote display device for receiving display signals directly from the local video card through the main transmitter and for displaying a display to the user, said remote display device featuring a remote receiver for receiving said display signals; and

(b) a remote input platform for receiving input data from the user and for transmitting said input data directly to the local input port of the main computer through the main receiver, said remote input platform featuring a remote transmitter for transmitting said input data to the main receiver;

such that the device lacks a CPU (central processing unit) and such that only the main computer has said CPU.

2. The device of claim 1, wherein said remote receiver and the main receiver are both radiowave receivers.

3. The device of claim 2, wherein said radiowave receiver receives radiowaves in a range of from about 2.4 GHz to about 5.8 GHz.

4. The device of claim 3, wherein said radiowave receiver is an ISM band receiver.

5. The device of claim 1, wherein said remote transmitter and the main transmitter are both radiowave transmitters.

6. The device of claim 5, wherein said radiowave transmitter transmits radiowaves in a range of from about 2.4 GHz to about 5.8 GHz.

7. The device of claim 6, wherein said radiowave transmitter is an ISM band SP^2 transmitter.

8. The device of claim 1, wherein said display is at least a visual display, and wherein said remote display device further comprises:

(i) a video expander for receiving said display signals from said remote receiver and for expanding said display signals to produce expanded signals; and

(ii) a screen for displaying said display signals according to said expanded signals from said video expander.

9. The device of claim 8, wherein said screen is selected from the group consisting of a plasma screen, a LCD (liquid crystal display) screen and a CRT (cathode ray tube) screen.

10. The device of claim 8, wherein said display is at least an audio display and said remote display device further comprises:

(iii) an audio amplifier for amplifying audio signals from said remote receiver; and

(iv) a speaker for audibly displaying said audio display to the user according to said audio signals received from said audio amplifier.

11. The device of claim 1, wherein said remote input platform further comprises a remote keyboard and a remote pointing device.

12. The device of claim 11, wherein said remote input platform further comprises a joystick port.

13. The device of claim 12, wherein said remote input platform further comprises a microphone.

14. A system for remote interaction with a user, comprising:

(a) a main computer, said main computer featuring a CPU, said main computer comprising:

(i) a main radio transmitter for transmitting radiowaves and a main receiver for receiving radiowaves;

(ii) a plurality of video cards, including at least a first video card being locally connectable; and

(iii) an operating system capable of controlling said plurality of video cards substantially simultaneously;

(b) a remote display device for receiving display signals from a second of said plurality of video cards through said main transmitter of said main computer and for displaying a visual display to the user, said remote display device featuring a remote radiowave receiver for receiving said display signals, said remote display device lacking a CPU; and

(c) a remote input platform for receiving input data from the user and for transmitting said input data to said main computer, said remote input platform featuring a remote radiowave transmitter for transmitting said input data, said remote input platform lacking a CPU.

15. The system of claim 14, wherein said main computer further comprises:

(iv) a local input device; and

(v) an input device port for receiving input data from said local input device and from said remote input platform;

and wherein the system further comprises:

(d) a switching box for switching said input data from said local input device and from said remote input platform to said input device port.

16. The system of claim 15, wherein said main computer features a main radiowave receiver for receiving radiowaves from said remote input platform.

17. The system of claim 15, wherein said switching box features a main radiowave receiver for receiving radiowaves from said remote input platform, said switching box passing said radiowaves to said main computer.